

**WHAT IS CLAIMED IS:**

1. A method for maintaining system integrity in a multiple user environment, the method comprising:

5 marking a first procedure associated with a first stack "isolated", wherein the first procedure is declared by a second procedure associated with a second stack; and

10 in response to an external command associated with the first procedure, allotting a predefined period of time for the first procedure to complete before executing the external command.

2. The method of claim 1, wherein the external command is a terminate command.

15 3. The method of claim 1, wherein the external command is an interrupt command.

20 4. The method of claim 1, wherein the external command is a resource-terminated command.

5. The method of claim 1, further comprising postponing execution of the external command for the predetermined period of time.

25 6. The method of claim 5, wherein the predefined period of time comprises a range of 4 to 6 seconds of CPU processing time.

7. The method of claim 1, further comprising issuing a message to a system console.

8. The method of claim 2, further comprising terminating the first procedure and the second procedure.

5 9. The method of claim 3, further comprising executing the interrupt command.

10 10. The method of claim 4, further comprising receiving a command to increase a resource allocation amount by a predefined amount of time.

11 11. The method of claim 10, further comprising postponing execution of the resource-terminated command for a specified period of time.

12 12. The method of claim 4, further comprising terminating the first procedure and the second procedure.

15 13. A method for maintaining system integrity in a computer system, comprising:

16 associating a first procedure with a child stack, the first procedure having an associated second procedure, wherein the second procedure is a parent procedure  
17 and is associated with a parent stack; and  
20

in response to receiving a command associated with the first procedure, permitting the first procedure to continue processing for a predetermined period of time, before executing the command.

25 14. The method of claim 13, wherein the command is one of a command to terminate and a command to interrupt the first procedure.

15 15. The method according to claim 14, wherein the interrupt command is issued because a time allotted to a resource has elapsed.

16. The method according to claim 15, wherein the time allotted to the resource is extended for a specified period of time.

17. The method according to claim 14, wherein the first procedure and  
5 the second procedure are terminated.

18. The method according to claim 14, wherein the interrupt command is executed.

10 19. The method according to claim 13, wherein a message is issued to a system console.

20. The method of claim 13, wherein the child stack is comprised of at least one of a plurality of frames, wherein the at least one frame is associated with a  
15 procedure.

21. The method of claim 20, wherein the at least one of a plurality of frames are processed in order from top to bottom.

20 22. The method of claim 21, wherein the at least one frame is marked "isolated".

23. A method for maintaining system integrity in a computer system, comprising:

25 associating a first procedure with a child stack, the first procedure having an associated second procedure, wherein the second procedure is a parent procedure and is associated with a parent stack; and

in response to receiving a terminate command associated with the second procedure, terminating the first procedure.

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24. A system for maintaining system integrity comprising:

a memory for storing and manipulating stacks; and

a central processing unit that executes computer-readable instructions for maintaining system integrity in a multiple user environment, the computer-readable instructions including instructions for:

associating a first procedure with a child stack, the first procedure having an associated second procedure, wherein the second procedure is a parent procedure and is associated with a parent stack;

in response to receiving a command associated with the first procedure, before executing the command, permitting the first procedure to continue processing for a predetermined period of time.

25. The system of claim 24, wherein the command associated with the first procedure is one of a command to terminate the first procedure and a command to interrupt the first procedure.

26. The system of claim 25, wherein the computer-readable instructions comprise further computer-readable instructions to terminate the first procedure and the second procedure if the first procedure does not complete execution within the predetermined period of time.

27. The system of claim 25, wherein the command associated with the first procedure is the command to interrupt the first procedure.

28. The system of claim 27, wherein the computer-readable instructions include further computer-readable instructions for interrupting the first procedure if the first procedure does not complete execution within the predetermined period of time.

29. A computer-readable medium containing computer-executable instructions for performing the method of:

associating a first procedure with a child stack, the first procedure having an associated second procedure, wherein the second procedure is a parent procedure

5 and is associated with a parent stack; and

in response to receiving a command associated with the first procedure, permitting the first procedure to continue processing for a predetermined period of time, before executing the command.